

Every Mother Initiative

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Postpartum Hemorrhage: Definition, Risk Factor Assessment, Prevention, Early Recognition and Response

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Disclosures

- I have no conflicts of interest relevant to this presentation
- I receive research support from AirStrip for a study evaluating the feasibility of at-home NSTs

Disclosures

- I was on call last night and delivered 15 babies
- I slept zero
- I accidentally brewed decaffeinated coffee this morning 😞

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Objectives

Discuss how PPH definition, risk factor assessment, prevention, early recognition and response can be *integrated into the healthcare system.*

Objectives

So...we have these tools. What do we do with them??

November 24

- Systems Level Readiness: Medical and surgical management including uterotonic medications and procedures (intrauterine balloon, uterine compression suture)

January 12

- Systems Level Readiness:
OB Rapid Response Teams and Algorithms

UNIVERSAL OB MATHMATICAL CONSTANT

UNIVERSAL OB MATHMATICAL CONSTANT

$$240 =$$

UNIVERSAL OB MATHMATICAL CONSTANT*

$$240 =$$

$$\text{FETAL HR} + \text{MD HR}$$

*M. Varner, MD
Obstetrician/Mathematician

Choosing a PPH Definition

- Primary hemorrhage: Occurs within the first 24 hours of delivery
- In the U.S., it is classically defined by volume of blood loss
 - EBL >500 mL after vaginal birth
 - EBL >1000 mL after cesarean delivery
- Revised definition of >1000 mL after any delivery
 - “Active bleeding >1000 mL within the 24 hours following birth that continues despite the use of initial measures including first-line uterotonic agents and uterine massage.”

**Evaluation and management of postpartum hemorrhage:
consensus from an international expert panel. Transfusion.
2014 Jul;54(7):1756-68.**

Choosing a Definition

- Revised definition of >1000 mL after any delivery
 - Consistent for all deliveries
 - Identifies women at high risk of adverse clinical outcomes
 - However, need protocol-driven earlier threshold to begin treatment

**Evaluation and management of postpartum hemorrhage:
consensus from an international expert panel. Transfusion.
2014 Jul;54(7):1756-68.**

Choosing a Definition

- UUHSC has retained the 'classic definition'
 - Ongoing quality improvement and safety initiative (comparing apples to apples)
 - Care algorithm is based on this definition
 - Concern regarding delayed treatment if we changed the definition
- From a hospital perspective, definition consistency is critical to implementing education and clinical protocols
- From a state perspective, definition consistency will be important for prospective assessment of trends and for comparisons

Choosing a Definition

- Can we reach consensus?
- Do we need to reach consensus?

Risk Factor Assessment

- Risk factors derived from the California Maternal Quality Care Collaborative <http://www.cmqcc.org>
- Evidence-based
- Expert consensus
- Modifiable for each institution / hospital
 - We made minor modifications for UUHSC after multi-disciplinary committee review

Obstetric Hemorrhage Care Guidelines

All patients are active participants in their care. Patients should be informed of any risk factors they may have or develop for PPH and advised of recommendations for their care. These recommendations may be individualized to reflect the patient's decisions.

Prenatal Assessment Planning		
Identify and prepare for patients with special considerations: placenta previa/accrete, bleeding disorders or those who decline blood products (and have risk factors)		
Admission Hemorrhage Risk Factor Evaluation		
Low Risk <ul style="list-style-type: none"> No previous uterine incision Singleton pregnancy <4 previous births No known bleeding disorder No history of PPH 	Medium Risk – Red Dot Treat 2 or more risk factors as “high risk” <ul style="list-style-type: none"> TOLAC Multiple gestation ≥ 4 previous births History of previous PPH Large uterine fibroids Polyhydramnios Estimated fetal weight > 4 kg Morbid obesity (BMI > 35) 	High Risk – Red Dot <ul style="list-style-type: none"> Placenta previa Suspected placenta accreta or percreta Hematocrit < 30 AND other risk factors Platelets < 20,000 Known coagulopathy – draw/send appropriate lab tests as specifically ordered for this patient
Admission Assessment & Planning		Ongoing Risk Assessment
Type and Screen all patients on admission	Evaluate for risk factors on admission <ul style="list-style-type: none"> It is strongly recommended that all women who meet criteria for medium/high risk have IV access If high risk, T&C for 2 units PRBC's & keep ahead 2; - keep these units available for 24 hours post delivery Identify women who may decline transfusion and counsel and consent If the patient has moderate/high risk for PPH: <ul style="list-style-type: none"> Review OB Hemorrhage Guideline 	Evaluate for development of additional risk factors in labor: <ul style="list-style-type: none"> Prolonged 2nd stage labor (4 hours, including time for “rest and descend”) Any oxytocin use Sustained antepartum bleeding Chorioamnionitis Risk Factors in this column are considered medium risk and need to be added to admission risk factors Treat 2 or more risk factors as “high risk”
Stage 0: All Births – Prevention & Recognition of OB Hemorrhage		
<ul style="list-style-type: none"> Active management of the third stage of labor 		
<ul style="list-style-type: none"> Administer all IV Pitocin per postpartum Pitocin guideline or give 10 U Pitocin IM 		
<ul style="list-style-type: none"> After initial EBL for delivery is determined all subsequent blood loss will be quantified (weighed) for 24 hrs and documented in I&O 		
<ul style="list-style-type: none"> Ongoing evaluation of vital signs per guideline/orders 		
<ul style="list-style-type: none"> Empty bladder; patients who have received an epidural/spinal are cathed (straight or Foley) prior to transfer to postpartum 		
<ul style="list-style-type: none"> If patients fundus is not firm but EBL <500: <ol style="list-style-type: none"> Vigorous crede for at least 15 seconds Empty her bladder Consider Methergine (notify the OB Resident/Provider if this is given) 		

Comprehensive Education Prior to Implementation

- Multi-disciplinary committee review *and revision...and revision...and revision* → CONSENSUS
- Labor and delivery staff education
- Nursing education
- Physician education (from multiple practice groups)
- CNM education
- Resident education (ob/gyn and off-service)

m o n t h s



Comprehensive Education Prior to Implementation

- Iterative process:
 - Educate...revise...educate...revise...educate...
 - Educate...educate...educate...educate...educate

y e a r s



Make Care Guideline Easily Accessible

- Distribute during educational sessions
 - Provide paper and electronic copies
- Post on the unit near work stations and 'the board'
 - Post in bathrooms, break rooms
- Display in common areas (posters)
- Put documents into the EMR, if possible

Make Care Guideline Easily Accessible

The screenshot displays the Epic Summary page for a patient. The interface is organized into several sections:

- Quick View:** Includes links to Patient Care Snapshot, Comprehensive Flowsheet, SBAR Handoff, ED Encounter Summary, ED Patient Care Timeline, Shift Assessment, Medical, Surgical, Social, and Family History, Care Plan & Patient Education, Restraints, Discharge, Code Summary (for printing), Overview, and Blood Transfusion.
- Therapy:** Includes Therapy Flowsheet, PT Overview, OT Overview, SLP Overview, and Rehab Nursing Flowsheet.
- Significant Events:** Includes Code Summary (for printing), Code Data, Sedation Summary, Sedation Review Timeline, and Blood Transfusion.
- Orders:** Includes Active Orders, Medication Administration, and Cancel Individual Lab Collections.
- Medications:** Includes Current Meds, Medication History, Anti-coagulation Dosing, Fever/antibiotic Dosing, and Glucose Monitoring.
- Results:** Includes Labs - Last 72 Hours, Labs - Entire Admission, Microbiology Results, and Radiology Results.
- Perinatal:** Includes Current Pregnancy Summary, Labor Assessment, L&D Timeline, Delivery Summary, NST Results, Hemorrhage Care Guideline (highlighted), Hemorrhage Care Summary (highlighted), and Oxytocin- Labor 3rd Stage (highlighted).
- Pediatric:** Includes Pediatric Comprehensive Flowsheet, Delivery Data, TPN History, and OB Pediatric Rounding.
- Infection Control Reports:** Includes VAP, Central Line Infection, Device UTI, MDRO/C Diff, and Surgical Site Infection.
- Oncology:** Includes Oncology Summary, Treatment & Support Plan, and Infusion Summary.
- Print:** Includes Patient Instructions, Amb Facesheet, and IP Facesheet.

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PPH Risk Assessments – Nursing (Triage, Admission, Shift Assessment Navigators)

Triage Assessment	Admission Assessment	Shift Assessment
OB Risk Assessm...	OB Risk Assessm...	Vitals/Measuremen...
Cervix & Membranes	Cervix & Membranes	Pain
Fall Risk	Delivery Preferences	OB Risk Assessm...
Fall Prevention	Head to Toe	Head to Toe
Psychosocial	Fall Risk	LDAs
Head to Toe	Fall Prevention	Fall Risk
	Functional	Fall Prevention
	Nutrition	Braden Scale
	Psychosocial	Daily Cares
	Discharge Planning	Intake and Output
	Quality & Safety	Nursing Narrative

Links to OB risk assessment are integrated into EMR navigators for nurses and providers.

No EMR?
Find ways to integrate the assessment into work flow...
Forms, checklists.

PPH Risk Assessments – Providers (Triage, Admission, Rounding)

Assessment	Overview/Assessment
Vitals/Measuremen...	BestPractice
Pain	OB Admission Info
Review of Systems	L&D Progress Rep...
Physical Exam	OB Risk Assessm...
Cervix & Membranes	Contraceptive Plan
OB Risk Assessm...	
Fall Risk	
Fall Prevention	
Psychosocial	

Initial Nursing Assessment

EMR Or Checklist

OB Risk Assessment

Time taken: 1126 10/8/2015

▼ OB Risk Assessment

OB Maternal Risk Factors

- No risk factors identified at this assessment time
- Pitocin turned off and on greater than 2 times
- Patient has had one trip to the O.R. and then returned to room to labor
- Received terbutaline for tachysystole with fetal involvement within the past 2 hours
- Currently receiving an amnioinfusion
- TOLAC patient
- Subset of Cat. II tracings
- Unstable or multiple issues patient

OB Anesthesia Risk Factors

- Difficult airway
- Pre-eclamptic/eclamptic patient
- Complex medical history
- Morbid obesity
- Intrathecal catheter

PPH Risk Factors

TOLAC	Suspected placenta accreta or percreta
Multiple gestation	Hematocrit < 30 AND other risk factors
Greater than or equal to 4 previous vaginal births	Platelets < 70,000
History of previous PPH	Known coagulopathy
Large uterine fibroids	Prolonged 2nd stage labor (4 hours, including time for 'rest and descend')
Estimated fetal weight > 4 kg	Any oxytocin use
Morbid obesity (BMI > 35)	Sustained active bleeding
Platelets < 100,000	Chorioamnionitis
Placenta previa	

PPH Risk Evaluation

- Low risk
- Medium Risk
- High Risk

Overall OB Risk

- No Risk Identified
- Maternal Risk
- Anesthesia Risk
- Both Maternal and Anesthesia Risk

White dot indicates no risk factors identified.
Purple dot indicates both maternal and anesthesia risk.
Red dash indicates assessment not completed.

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OB Antepartum Strip Review

Membrane Status: SROM

Rupture Date: 10/06/15

Rupture Time: 1330

Fluid Color: (!) **Meconium**

Dilation: 10

Effacement (%): 100

Station: +1

Baseline FHR: 120 per minute

Fetal heart variability: moderate

Fetal heart rate accelerations: **present**

Fetal heart rate decelerations: variable

Uterine contractions: regular, every 2 minutes

OB Risk Assessment				
OB Maternal Risk Factors	OB Anesthesia Risk Factors	PPH Risk Factors	PPH Risk Evaluation	Overall OB Risk
		Greater than or equal to 4 previous vaginal births	Medium Risk	Maternal Risk

Room ▲	Nurse	Risk	Name/MRN/...
2401		—	Promise, Ja...
2402	Janet F	○	App, Inductio...
2404	Christine S	●	Application, ...
2414	Janet F	○	Application, ...
LND		—	Storm, Leah ...
LND		●	Stork, Mom...
LND		—	Column, Mor...
LND		—	Column, Tes...
LND	Kimberly M	●	Test, Patty (...)
ORA		—	Wilfork, Vinn...

**DISPLAY RISK ASSESSMENT
FOR EASY REFERENCE:**
Grease board- electronic and 'old school'
Summary reports or chart flags

← Pregnancy

Stork, Momma [20208032]

Birth Date: 08/03/85 Age (as of 10/08/15): 30
History: G1P1

📌 Sticky note

OB Risk Assessment

OB Maternal Risk Factors	OB Anesthesia Risk Factors	PPH Risk Factors	PPH Risk Evaluation	Overall OB Risk
Pitocin turned off and on greater than 2 times; Patient has had one trip to the O.R. and then returned to room to labor; TOLAC patient	Difficult airway	History of previous PPH; Hematocrit < 30 AND other risk factors	High Risk	Both Maternal and Anesthesia Risk

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Risk Factor Assessment

- What strategies have you used?
- What creative strategies can you brainstorm?

Prevention, Early Recognition and Response


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Stage 1: OB Hemorrhage: Meet one or more of the following criteria		
1. Cumulative Blood Loss > 500 ml vaginal birth or > 1000 ml C/S AND/OR 2. Sustained Active Bleeding		
MOBILIZE	ACT	THINK (differential diagnosis)
<p>L &D - Initiate OB Rapid Response: Stage 1 PPH*</p> <p>If in the OR – just page the CN to make her aware</p> <p>Postpartum (MNBC or WSC units) – Initiate OB Rapid Response: Stage 1 PPH*</p> <p>*Call 1-2222 or use Smartweb</p> <p>Team to go immediately to the bedside to evaluate the patient</p> <p>If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify</p>	<p>Primary nurse / L&D Rapid Response team</p> <ul style="list-style-type: none"> Tasks are designated on OB Rapid Response grid including: <ul style="list-style-type: none"> Constant crede until uterine tone improves IV resuscitation Administer uterotonics as ordered Vital Signs q5 minutes Empty bladder Oxygen to maintain Sat≥95 Keep patient warm <p>Charge Nurse:</p> <ul style="list-style-type: none"> Initiate the Hemorrhage/Massive Hemorrhage Care set Order T&C 2 Units PRBC's/keep ahead 2 if not already done <p>Physician or Midwife:</p> <ul style="list-style-type: none"> Initiate treatment for atony-sequentially advance through appropriate uterotonics Rule out retained products of conception Laceration Hematoma <p>Surgeon:</p> <ul style="list-style-type: none"> Inspect for uncontrolled bleeding at all levels, esp. broad ligament, posterior uterus and retained placenta 	<p>Consider potential etiology</p> <ul style="list-style-type: none"> Uterine atony Trauma/laceration Retained placenta Amniotic fluid embolism Coagulopathy Placenta accreta Uterine rupture
Patient should respond to these interventions within 10 minutes. If not, or if other procedures (uterine tamponade/banjo curette) are needed, move on to the Stage 2 response. If the patient is on Postpartum Unit, she needs to be transferred to L&D immediately.		

UTEROTONIC AGENTS for POSTPARTUM HEMORRHAGE						
Drug	Administration Priority	Dose	Route	Frequency	Contraindications	Possible Side Effects
Pitocin		30 units in 500 ml	IV	Per Guideline	Hypersensitivity to the drug	Usually none; potentially hypotension, nausea, vomiting, hyponatremia with prolonged IV administration
Methergine		0.2 mg	IM	Q 2-4 hours	Hypertension	Severe hypertension, nausea, vomiting
Hemabate		250 mcg	IM	Q 15 minutes for 8 doses/24 hours	Asthma/bronchospasm	Bronchospasm, diarrhea, nausea, vomiting, fever/chills
Cytotec		800 mcg	PR	One dose	Hypersensitivity to the drug	Diarrhea, nausea, vomiting, fever/chills

Stage 2: OB Hemorrhage

Meet Stage 1 criteria with continued sustained active bleeding not responding to interventions within 10 minutes with < 1500 mL cumulative blood loss

MOBILIZE	ACT	THINK (differential diagnosis)	
<p>L & D Send out the OB Rapid Response Stage 2 PPH (come now) page This alerts the whole team to respond</p> <p>Recommend that the patient is moved to the OR at this time.</p> <p>If the patient is on a postpartum unit and has progressed to a Stage 2 PPH she is transferred immediately to L&D ➤ Notify L&D of transfer</p> <p>If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify</p>	<p>Primary nurse/L&D Rapid Response Team</p> <ul style="list-style-type: none">• Call the Blood Bank and notify them of the need for emergency blood products as directed• Tasks/responsibilities as designated on the OB Rapid Response grid	Sequentially advance through procedures and other interventions based on etiology	
		<p>Vaginal Birth: Evaluate for uterine atony:</p> <ul style="list-style-type: none">• Continue with uterotonics• Uterine tamponade balloon• Consider surgical interventions <p>Evaluate for lacerations</p> <ul style="list-style-type: none">• Visualize and repair <p>Evaluate for retained products of conception:</p> <ul style="list-style-type: none">• Manual removal• D&C <p>Evaluate for uterine inversion:</p> <ul style="list-style-type: none">• General anesthesia or Nitroglycerine for uterine relaxation for manual reduction	<p>Cesarean Section:</p> <ul style="list-style-type: none">• Continue with uterotonics• B-Lynch• O’Leary• Uterine tamponade balloon
		<p>If Amniotic Fluid Embolism (AFE): Maximally aggressive respiratory, vasopressor and blood product support</p>	
Once Stabilized: modified postpartum management with increased surveillance			
If cumulative blood loss > 1500 mL, >2 units of PRBC’s given, hemodynamically unstable or suspicion for DIC: Proceed to Stage 3			

Stage 3: OB Hemorrhage

Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

MOBILIZE	ACT	THINK (differential diagnosis)
<p>Patient must be moved to the OR at this time if she is not already there</p> <p>If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify</p>	<p>Primary nurse/L&D Rapid Response Team:</p> <ul style="list-style-type: none"> Tasks/responsibilities as designated on OB Rapid Response grid <p>Primary nurse or designee:</p> <ul style="list-style-type: none"> Obtain/send ABG's and labs as ordered 	<ul style="list-style-type: none"> Prevention of hypothermia, acidemia Conservative or definitive surgery: <ul style="list-style-type: none"> B-Lynch O'Leary Hysterectomy Transfuse blood products as needed Unresponsive coagulopathy Consider off-label use of factor rVIIa for severe PPH refractory to treatment

Once stabilized:

- Consider ICU transfer (notify the House Supervisor)
- Vigilant postpartum management with increased surveillance

Blood Products

Packed Red Blood Cells (PRBC): <ul style="list-style-type: none"> Type & Screen :approximately 60-90 minutes to complete Type & Cross: approximately 30 minutes to convert T&S to cross matched blood If you cannot wait the 30 minutes for cross matched blood you may receive: <ul style="list-style-type: none"> O negative Type specific blood but not crossmatched 	1 unit typically increases to Hct by 3 %
Fresh Frozen Plasma (FFP): Approximately 30 minutes to thaw	1 unit typically 180 ml and typically increased Fibrinogen by 10mg/dL
Platelets: Approximately 15 minutes to thaw	Provides a transient 40-50 K increase in platelet count
Cryoprecipitate (Cryo): Approximately 30 minutes to thaw	10 pack typically raises Fibrinogen 80-100 mg/dL
Factor rVIIa	<ol style="list-style-type: none"> Dose is 90 mcg/kg, infused over 3-5mins Second dose 90 mcg/kg can be considered if there is no response in 20- 30mins. <p>Do not use rFVIIa to compensate for an inadequate transfusion therapy - aim for PLTs> 50, INR<1.5 and fibrinogen >1g/l and correct acidosis, hypocalcemia and hypothermia before using rFVIIa.</p>

Prevention, Early Recognition and Response

- Do you have an algorithm?
- What does it look like? (Where do you find it?)
- What should it look like?

Documentation of PPH

Complications

Clinical chorioamnionitis? (maternal fever > or = 38 degrees C (100.4 F) and at least one additional finding: maternal tachycardia, fetal tachycardia, uterine tenderness, foul/purulent amniotic fluid, maternal leukocytosis)

None	Abnormal Labor - Prolonged Latent Stage	Postpartum Hemorrhage	Uterine Inversion
Anesthetic Complications	Abnormal Labor - Prolonged First Stage	Retained Placenta without Hemorrhage	Uterine Rupture
Dysfunctional Labor	Abnormal Labor - Prolonged Second Stage	Unsuccessful TOLAC	Abnormal or nonreassuring FHR tracing leading to delivery
Seizures During Labor	Cord Prolapse	Unsuccessful Forceps Attempt	Suspected Cephalopelvic Disproportion
Placental Abruption	Hematoma	Unsuccessful Vacuum Attempt	Abnormal Labor - Arrest in First Stage
Shoulder Dystocia	Malpresentation	Urinary Tract Injury	Abnormal Labor - Arrest in Second Stage
Chorioamnionitis	Placenta Accreta Spectrum		

	Additional complications
1	

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PPH Associated with Delivery

Postpartum Hemorrhage Associated with Delivery	
Postpartum hemorrhage classification:	<div>Third stage (associated with retained, trapped, or adherent placenta immediately after delivery)</div> <div>Immediate Postpartum (1st 24 hrs after delivery of the placenta)</div> <div>Coagulation Defect Associated with Hemorrhage (DIC)</div>
Postpartum hemorrhage stage:	<div><input checked="" type="radio"/> Stage 1 - Cumulative blood loss > 500 mL vaginal birth, > 1000 mL C/S. Responds to treatment within 10 minutes</div> <div><input type="radio"/> Stage 2 - Meets Stage 1 criteria with continued sustained active bleeding < 1500mL. Did not respond to treatment within 10 minutes</div> <div><input type="radio"/> Stage 3 - Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC</div>
Third Stage Manuevers:	<div>Manual extraction</div> <div>Curettage</div>
Curretage type:	<div>Suction</div> <div>Banjo curette</div>
Uterotonics:	<div>Pitocin</div> <div>Cytotec</div> <div>Hemabate</div> <div>Methergine</div>
<div>Add Brief Postpartum Hemorrhage Comment(s)</div> <div>Add Detailed Postpartum Hemorrhage Comment(s)</div>	

PPH Associated with Delivery

Postpartum Hemorrhage Associated with Delivery

Postpartum hemorrhage classification:

Third stage (associated with retained, trapped, or adherent placenta immediately after delivery)

Immediate Postpartum (1st 24 hrs after delivery of the placenta)

Coagulation Defect Associated with Hemorrhage (DIC)

Postpartum hemorrhage stage:

- ☒ **Stage 1 - Cumulative blood loss > 500 mL vaginal birth, > 1000 mL C/S. Responds to treatment within 10 minutes**
- ☐ Stage 2 - Meets Stage 1 criteria with continued sustained active bleeding < 1500mL. Did not respond to treatment within 10 minutes
- ☐ Stage 3 - Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

Immediate PPH - Etiology:

Atony

Genital Tract Laceration

Retained Products of Conception

Atony maneuvers:

Uterine massage

B-Lynch Suture

O'Leary Suture

Intrauterine Balloon

Other (Add comment)

Other atony maneuvers:

Uterotonics:

Pitocin

Cytotec

Hemabate

Methergine

Genital tract laceration comment:

See laceration section for repair details

Retained products procedures:

Manual extraction

D&C

Uterotonics:

Pitocin

Cytotec

Hemabate

Methergine

Add Brief Postpartum Hemorrhage Comment(s)

Add Detailed Postpartum Hemorrhage Comment(s)

PPH Associated with Delivery

Postpartum Hemorrhage Associated with Delivery

Postpartum hemorrhage classification:

Third stage (associated with retained, trapped, or adherent placenta immediately after delivery)

Immediate Postpartum (1st 24 hrs after delivery of the placenta)

Coagulation Defect Associated with Hemorrhage (DIC)

Postpartum hemorrhage stage:

- ☐ Stage 1 - Cumulative blood loss > 500 mL vaginal birth, > 1000 mL C/S. Responds to treatment within 10 minutes
- ☐ Stage 2 - Meets Stage 1 criteria with continued sustained active bleeding < 1500mL. Did not respond to treatment within 10 minutes
- ☒ Stage 3 - Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

Add Brief Postpartum Hemorrhage Comment(s)

Add Detailed Postpartum Hemorrhage Comment(s)

Note: PPH After Delivery

Postpartum Hemorrhage After Delivery

Postpartum Hemorrhage Classification

Immediate Postpartum Hemorrhage (1st 24 hours after delivery)

Delayed Postpartum Hemorrhage (more than 24 hours after delivery)

Coagulation Defect Associated with Hemorrhage (DIC)

Postpartum Hemorrhage ☐ Stage 1 - Cumulative blood loss > 500 mL vaginal birth, > 1000 mL C/S. Responds to treatment within 10 mins.

☒ **Stage 2 - Meets Stage 1 criteria with continued sustained active bleeding < 1500mL. Did not respond to treatment within 10 minutes**

Stage ☐ Stage 3 - Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

Immediate Postpartum Hemorrhage (1st 24 hours after delivery)

Etiology - Immediate PPH

Atony

Genital Tract Laceration

Retained Products of Conception

Atony Manuevers



Uterine massage

B-Lynch suture

O'Leary suture

Balloon

Uterotonics

Pitocin

Cytotec

Hemabate

Methergine

Genital Tract Lacerations

Retained Products
Procedures

Manual extraction

D&C

Uterotonics

Pitocin

Cytotec

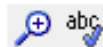
Hemabate

Methergine

EBL Associated with Hemorrhage (mL)

Total EBL Since Delivery Including Hemorrhage Event (mL)

Postpartum Hemorrhage
Narrative



abc



Insert SmartText



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Documentation of PPH Prevention: MD

Postpartum Hemorrhage Prevention

Risk stratification performed?

Yes

No

☐ No clinically significant bleeding at this time

Active Management of the Third Stage of Labor

☐ Pitocin started with the delivery of the baby

☐ Controlled cord traction

☐ Massage of the uterine fundus

Prophylactic Medications Administered

☐ Cytotec (see MAR for administration details)

☐ Methergine (see MAR for administration details)

☐ Hemabate (see MAR for administration details)

Needed clear delineation of PPH prevention versus treatment:

- Improved coding and capture
- Allowed tracking of PPH bundle components

Documentation of PPH: RN

Our electronic note has clear sections for nurses and physicians to document WHAT THEY DO.

This works for PPH documentation, too.

Labor and Delivery Events / Times

Labor onset date/time:	<input type="text"/>	<input type="text"/>
Dilation complete date/time:	<input type="text"/>	<input type="text"/>
Start pushing date/time:	<input type="text"/>	<input type="text"/> <input type="button" value="Now"/>
Date/time head delivered:	<input type="text"/>	<input type="text"/> <input type="button" value="Now"/>
Shoulder dystocia present?	<input type="button" value="Yes"/>	<input type="button" value="No"/>
Forceps attempted?	<input type="button" value="Yes"/>	<input type="button" value="No"/>
Vacuum extractor attempted?	<input type="button" value="Yes"/>	<input type="button" value="No"/>
Postpartum hemorrhage present?	<input checked="" type="button" value="Yes"/>	<input type="button" value="No"/>

Postpartum Hemorrhage Details

PPH risk stratification performed?	<input type="button" value="Yes"/>	<input type="button" value="No"/>
OB rapid response called?	<input type="button" value="Yes"/>	<input type="button" value="No"/>
Hemorrhage/Massive Hemorrhage order set initiated?	<input type="button" value="Yes"/>	<input type="button" value="No"/>

Recorded Blood Loss After Vaginal Delivery

Blood Loss Associated with Delivery

Vaginal delivery est. blood loss (mL):

*Blood Loss Report

Mother's Information

Start of Mother's Information

IO Blood Loss

↳ Mom's I/O Activity

Measured Blood Loss	Hospital Encounter	357 mL
Estimated Blood Loss	Hospital Encounter	200 mL
Total		557

Recorded Blood Loss After Cesarean

Blood Loss Associated with Delivery

Vaginal delivery est. blood loss (mL):

*Blood Loss Report

Mother's Information

Start of Mother's Information

IO Blood Loss

↳ Mom's I/O Activity

Measured Blood Loss	Hospital Encounter	55 mL
Estimated Blood Loss	Hospital Encounter	30 mL
Estimated Blood Loss	Anesthesia	673 mL
Total		758

Documentation of PPH

- How is your institution documenting PPH?
 - On L&D? On postpartum?
- Do you use forms or checklists?

Discussion
